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AeroGrow International Inc
900 28th Street
Suite 201
Boulder, CO 80303

EXAMINER

VALENTI, ANDREA M

ART UNIT	PAPER NUMBER
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3643

MAIL DATE	DELIVERY MODE
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11/14/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/528,110

Applicant(s)

BISSONNETTE ET AL.

Examiner

Andrea M. Valenti

Art Unit

3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-18,30,32,34,54,64 and 211 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-18,30,32,34,54,64 and 211 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Objections

Claim 54 is objected to because of the following informalities:

Claim 54, line 7, "for elevating and elevating" should merely be --for elevating--

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 64 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 64, section a), states "a liquid means for removably suspending one or more of a plant, seed, a growth medium for contacting a said plant or seed, and a net basket". It is not clear if applicant intends to claim one plant, one seed, one growth medium or one net basket. Or does applicant intend to claim either a plant, a seed, or a growth medium, in combination with a net basket? Examiner for examination purposes interprets it as one plant, one seed, one growth medium or one net basket. Clarification requested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 211, 1, 4, 5, 7, 9, 10, 12, 13, 16-18, 34, 54, 64 are rejected under 35

U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,976,064 to Julien.

Regarding Claim 211, Julien teaches a device for growing a plant or germinating a seed into a plant, wherein said plant may have one or more roots, said device for covering a vessel for containing a liquid, said device comprising: a) a means for removably suspending said plant (Julien Fig. 1 #6) in a gas (Julien Fig. 1 #3) above said liquid (Julien Fig. 1 #2); b) a means for elevating a first portion of said liquid (Julien Fig. 1 #9 right side) above the remaining liquid in said vessel and into said gas wherein said first portion of liquid falls through said gas into said remaining liquid; and c) a means for contacting a second portion of said liquid (Julien Fig. 1 #9 left side) with said plant, seed, or a growth medium contacting said plant or seed and allowing said second portion of liquid to return to the remaining liquid; whereby said one or more roots are permitted to grow in said gas and in said remaining liquid.

Regarding Claims 1, 4, 5, Julien teaches a device for growing a plant or germinating a seed into a plant, wherein said plant may have one or more roots, said device comprising: a) a vessel (Julien Fig. 1 #1) for containing a liquid; b) a means for removably suspending said plant (Julien Fig. 1 #6) in a gas (Julien Fig. 1 #3) above said liquid (Julien Fig. 1 #2); c) a means for elevating a first portion of said liquid (Julien Fig. 1 #9 right side) above the remaining liquid in said vessel and into said gas wherein said first portion of liquid falls through said gas into said remaining liquid; and d) a means for

contacting a second portion of said liquid (Julien Fig. 1 #9 left side) with said plant, seed, or a growth medium contacting said plant or seed and allowing said second portion of liquid to return to the remaining liquid; whereby said one or more roots are permitted to grow in said gas and in said remaining liquid.

Regarding Claim 34, Julien teaches a method for growing a plant or germinating a seed into a plant, wherein said plant has at least one root, said method comprising: a) providing a vessel (Julien Fig. 1 #1) for containing a liquid; b) providing a means for removably suspending said plant (Julien Fig. 1 #6) in a gas (Julien Fig. 1 #3) above said liquid (Julien Fig. 1 #2); c) providing a conduit (Julien Fig. 1 #9) in fluid communication with said liquid and said gas; and d) providing a means for delivering and delivering a first portion and a second portion (Julien Fig. 1 #9 and #12 coming from left and right side) of said liquid through said conduit whereby said first portion of liquid falls through said gas into the remaining liquid in said vessel, and whereby said second portion of liquid contacts said plant, said seed, or a growth medium contacting said plant or seed, and descends into said remaining liquid; whereby said root of said plant is permitted to grow in said gas and in said remaining liquid.

Regarding Claim 54, Julien teaches a method for delivering oxygen to a plant or seed which will germinate into a plant, said method comprising: a) providing a plant with at least one root or a seed which will germinate into a plant having at least one root; b) providing a liquid (Julien Fig. 1 #2 is "capable of") **capable of** having oxygen dissolved therein; c) providing a gas comprising oxygen gas (Julien Fig. 1 #3 air space, air inherently has oxygen in it); d) providing a means for elevating (Julien Fig. 1 #9) a

portion of said liquid above the remaining liquid; e) allowing said portion of liquid to fall through (Julien Fig. 1 #12) said gas into said remaining liquid whereby oxygen gas dissolves in said portion of liquid or said remaining liquid thereby forming oxygenated liquid; and f) providing a means (Julien Fig. 1 #6) for contacting and contacting said plant or seed with said oxygenated liquid.

Regarding Claim 64, Julien teaches a method for increasing the dissolved oxygen concentration in a liquid within a hydroponics device comprising: a) providing a hydroponics device comprising: a vessel (Julien Fig. 1 #1) for containing a liquid; a means for removably suspending (JULien Fig. 1 #6, suspends a plant) one or more of a plant, seed, a growth medium for contacting said plant or seed, and a net basket in a gas above said liquid; and a means for elevating (Julien Fig. 1 #9) a first portion and a second portion of said liquid above said remaining liquid and into said gas whereby said first portion (Julien Fig. 1 #12 right side) of liquid falls through said gas (Julien Fig. 1 #3) into the remaining liquid (Julien Fig. 1 #2) in said vessel, and whereby said second portion of liquid (Julien Fig. 1 #12 right side) can contact said plant, said seed, or a growth medium contacting said plant or seed, and descends into said remaining liquid; whereby said root of said plant is permitted to grow in said gas and in said remaining liquid; b) elevating said first portion of liquid (Julien Fig. 1 #9 right side) above said remaining liquid and into said gas; c) elevating said second portion of liquid (Julien Fig. 1 #9 left side) above said remaining liquid and into said gas; d) allowing said first portion of liquid to fall through said (Julien Fig. 1 #12 right side) gas and into said remaining liquid; and e) allowing said second portion of liquid (Julein Fig. 1 #12 left side) to

contact said plant, seed, growth medium, or net basket and descend into said remaining liquid; whereby the dissolved oxygen concentration in said first portion of liquid, in said remaining liquid, or in both is increased.

Regarding Claim 9, Julien teaches said second portion of liquid contacts said plant, seed, or said growth medium at about or below the height of said seed or transition region of said plant (Julien Fig. 1 #12).

Regarding Claim 10, Julien teaches for growing more than one plant (Julien Col. 3 line 11 "openings 5").

Regarding Claim 12, Julien teaches a first portion of liquid only contacts said gas and said remaining liquid (Julien Fig. 1 #12 left side shows that some of the drops do not come in contact with the plant and thus only contact the gas and remaining liquid).

Regarding Claim 13, Julien teaches said conduit has separate first and second exits (Julien Fig. 1 #9 left and right side) for said first and said second portions of liquid.

Regarding Claim 16, Julien inherently teaches said first portion of liquid falling through said gas (Julien #12 Fig. 1 right side) into said remaining liquid increases the dissolved oxygen content of said remaining portion of liquid or said first portion of liquid or both.

Regarding Claim 17, Julien inherently teaches said first portion of liquid falling (Julien #12 falls into #2 Fig. 1) into said remaining liquid increases negative ions within said device.

Regarding Claim 18, Julien teaches said liquid and said one or more roots are completely contained in one vessel (Julien Fig. 1 #1).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 8, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,976,064 to Julien.

Regarding Claim 32, Julien teaches a kit for growing a plant or germinating a seed into a plant, said kit comprising: a) a device for growing a plant or germinating a seed into a plant wherein said plant has one or more roots comprising: 1) a vessel (Julien Fig. 1 #1) for containing a liquid; 2) a means for removably suspending (Julien Fig. 1 #6) said plant in a gas (Julien Fig. 1 #3) above said liquid (Julien Fig. 1 #2); 3) a conduit (Julien Fig. 1 #9) in fluid communication with said liquid and said gas; and 4) a means for delivering a first portion and a second portion of said liquid (Julien Fig. 1 #12 left side and right side) through said conduit whereby said first portion of liquid falls through said gas into the remaining liquid in said vessel and said second portion of liquid contacts said plant, said seed, or a growth medium contacting said plant or seed, and descends into said remaining liquid; whereby said one or more roots are permitted to grow in said gas and in said remaining liquid.

Julien is silent on explicitly teaching instructions for using said device are provided. However, the examiner takes official notice that it is old and notoriously well-known to provide instructions with merchandise e.g. TVs, cars, lawnmowers, cake box,

toys etc come with instructions how to operate and assembly the device safely. It would have been obvious to one of ordinary skill in the art to modify the teachings of Julien at the time of the invention since the modification is merely the use of a known technique yielding predictable results.

Regarding Claim 6, Julien teaches drops and how the aperture sizes affect the pressure (Julien Col. 3 line 40-42), but is silent on explicitly teaching said drops have diameters greater than about 200 microns, greater than about 350 microns, greater than about 500 microns, greater than about 1000 microns, greater than about 2000 microns, or greater than about 5000 microns. However, it would have been obvious to one of ordinary skill in the art to modify the teachings of Julien at the time of the invention since the modification merely depends on the selected plant variety and desired application pressure. The modification is merely a change in size yielding predictable results, choosing from a finite number of identified, predictable solutions with a reasonable expectation of success.

Regarding Claim 8, Julien is silent on teaching comprising a means for delivering a third portion of said liquid through said conduit whereby said third portion of liquid falls through said gas, is permitted to contact said one or more roots, and contacts said remaining liquid. However, it would have been obvious to one of ordinary skill in the art to modify the teachings of Julien at the time of the invention since the modification is merely the duplication of a known element (Julien #9) for a multiple effect to meet the liquid needs of different plant varieties to enhance healthy growth and development [*In re Harza*, 274 F.2d 669, 671, 124 USPQ 378, 380 (CCPA 1960)].

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,976,064 to Julien in view of U.S. Patent No. 4,170,844 to Steele.

Regarding Claim 30, Julien teaches delivering a first portion and a second portion of said liquid through said conduit (Julien Fig. 1 #12 and 9 left and right side) whereby said first portion (Julien Fig. 1 #12 right side) of liquid falls through said gas into the remaining liquid in said vessel and said second portion of liquid (Julien Fig. 1 #12 left side) contacts said plant, seed, or a growth medium contacting said plant or seed, and descends into said remaining liquid; whereby said plant grows and a root of said plant is permitted to grow in said gas and in said remaining liquid providing carbon dioxide and oxygen (Julien air space #3 contains air which inherently contains both oxygen and carbon dioxide; Julien Col. 1 line 13 and 17); nutrients (Julien Col. 1 line 9)

Julien is silent on explicitly teaching and c) providing light to said plant. However, Steele teaches it is notoriously well-known to provide light to growing plants (Steele #46). It would have been obvious to one of ordinary skill in the art to modify the teachings of Julien with the teachings of Steele at the time of the invention to enhance plant health and development. The modification is merely the application of a known technique to a known device to yield predictable results.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,976,064 to Julien in view of U.S. Patent No. 4,332,105 to Nir.

Regarding Claim 15, Julien is silent on said first portion of liquid is delivered substantially vertically downward. However, Nir teaches a first and second liquid delivery and that the first delivery is substantially vertically downward (Nir Fig. 6 #146). It would have been obvious to one of ordinary skill in the art to modify the teachings of Julien with the teachings of Nir at the time of the invention to meet the needs of various plant varieties to ensure healthy development. The modification is merely the application of a known technique to a known similar device yielding predictable results.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,976,064 to Julien in view of U.S. Patent No. 4,177,604 to Friesen.

Regarding Claim 11, Julien a means for delivering said second portion of liquid to each of a plurality of plants separately. However, Friesen teach it is notoriously well-known to administer a liquid to a plurality of plants, but to each plant separately (Friesen Fig. 1 #24 and #42, each container #42 has its own #24). It would have been obvious to one of ordinary skill in the art to modify the teachings of Julien with the teachings of Friesen at the time of the invention for an efficient use of liquid to prevent wasting the liquid and to ensure each plant receives liquid.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent Pub. No. US 2003/0089037; U.S. Patent No. 2,431,890; U.S. Patent No. 5,394,647; U.S. Patent No. 6,021,602; U.S. Patent No. 4,454,684; U.S. Patent No.

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4,584,791; U.S. Patent No. 5,136,804; U.S. Patent No. 2,855,725; U.S. Patent No. 3,168,797; Japanese Patent JP 04200328 A.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea M. Valenti whose telephone number is 571-272-6895. The examiner can normally be reached on 7:00am-5:30pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 571-272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Andrea M. Valenti
Primary Examiner
Art Unit 3643

09 November 2007